HOT MIX ASPHALT (HMA) QUALITY CONTROL PLAN

INSTRUCTIONS

1. Indicate the project number and Airport in the space provided.

2 Test shown in bold is to be replaced with the appropriate information by the contractor as it relates to the project for which the plan is being submitted.

3. The Quality Control Responsibilities for the Division of Aeronautics' HMA projects can be found on the IDOT web site in the current Policy Memo 96-2.

4. Upon completion of the HMA Quality Control Plan, the contractor shall submit copies of the Plan to the Project Resident Engineer for recommendation/approval, who will then forward the Plan on to the Division of Aeronautics for approval.

5. This plan is required to be submitted for all HMA paving projects and must be signed by the Contractor, the Consultant, and the Division of Aeronautics before any paving can begin.

HOT MIX ASPHALT (HMA) QUALITY CONTROL PLAN

Airport:
IL Project #:
A.I.P. Project #:

Contractor: **(Name)**
(Address)

Personnel: QC Officer**: (Name, Company, and Resume)**

Plant Technicians: **(Name, Company, and Resume)**

Paver Technicians: **(Name, Company, and Resume)**

The mix for the subject project will be manufactured by **(producer name)** in their **(plant manufacture, model and capacity).**
(Name of QC Officer) will have overall responsibility and authority for Quality Control at both the plant and at the paver and will make needed adjustments in the mix production, sampling, and testing to assure that the mix is manufactured and sampled in conformance with the Division of Aeronautics' Standard Specifications and the Special Provisions. In the event of **(QC Officer's name)** absence, **(name of backup QC Officer)** will be in charge of Overall Quality Control, provided he/she has the necessary qualifications and has been approved by the Engineer.

A. LABORATORY

(Give description of the laboratory floor size and the equipment therein).

Prior to the first day of production of mix, the lab and plant shall be inspected and approved for use by the local I.D.O.T. Highways district (dated in the current calendar year of the project), and those approval letters shall be supplied to the Engineer before any mix is placed. The Engineer will be notified by the contractor prior to the first day of production of mix that the lab is ready for inspection by the Resident Engineer for this project, which must also be done prior to any mix production. In the event of laboratory equipment breakdown, the equipment will be repaired or replaced immediately or the mix production will be shut down until the equipment is in working order.

B. Materials and Inspection

The materials used in the manufacture of the HMA for the project shall be from approved sources. Certification will be obtained from each vendor and furnished to the Engineer to cover the quantity and quality of all materials used. Listed below are the sources of each material proposed for use in the mix:

(List the source of all materials to be used in the manufacture of the HMA)

All aggregates at the HMA plant will be stockpiled by the “single layer/pushed” or “multi-layered truck” method. The maximum layer thickness will be as specified in the Standard Specifications for Construction of Airports.

C. Mix Designs

All HMA mix designs, as developed by **(insert contractor name or representative name)**, shall be approved by the Division of Aeronautics. A letter of approval from the Division of Aeronautics shall be received by the contractor before any mix shall be placed on the project.

D. HMA Plant

The plant is a **(manufacture and model)**, and has been calibrated by (**agency**) and approved by **(agency).** The weigh scales were checked by **(company**) on **(date**). We anticipate producing for **(hours)** per day from **(time)** to (**time**), producing and placing approximately **(tons**) per day on average.

E. Material Sampling Frequency and Testing

(Refer to Policy Memo 96-2, Appendix B for frequency and testing of material samples)

F. Testing

The following individuals/company will supervise and perform the Quality Control Program during HMA placement:

(List company testers or subcontracted Testing Company and their personnel)

All Testing equipment will be supplied by **(company)** and the laboratory will be provided by **(company).**

All tests will be performed in accordance with the following ASTM and IDOT specifications:

ASTM D 70	Test Method for Specific Gravity and Density of Semi-Solid Materials
ASTM C 117	Test Method for Materials Finer than 75 µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C 136	Sieve or Screen Analysis of Fine and Coarse Aggregate
ASTM C 566	Total Moisture Content of Aggregate by Drying
ASTM D 75	Sampling Aggregates
ASTM D 1559	Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus

ASTM D 2041	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D 2172	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
ASTM D 2726	Bulk Specific Gravity of Compacted Bituminous Mixtures using Saturated Surface Dry Specimens
ASTM D 3203	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
ASTM D 2950	Density of Bituminous Concrete in Place by Nuclear Method
ASTM D 4125	Asphalt Content of Bituminous Mixtures by Nuclear Method
ASTM C 127	Standard Test Method for Specific Gravity and Absorption of Coarse Aggregate
ASTM C 128	Standard Test Method for Specific Gravity and Absorption of Fine Aggregate
IDOT	Ignition Method for Determining Asphalt Content

There will be a current copy of all applicable ASTM tests available at the field laboratory.

G. Mix Production

At the start of HMA mix production or when adjustments are made to the mix, the QC Officer will coordinate the proportions with plant operator and, periodically throughout the day, checks will be made on the mix per the sampling frequency set forth in the current Division of Aeronautics Policy Memo 96-2. The results shall be recorded on the appropriate forms and faxed to the Division of Aeronautics and the Resident Engineer immediately upon completion.

H. Laydown

The mix will be laid on the prepared base in accordance with the specifications using the following equipment:

(Paver and roller equipment made and model)

Should any adverse mix characteristics be observed, the laydown superintendent will notify the QC Officer to review the manufacture of the mix and make adjustments if necessary to correct the situation. No changes to the mix shall be made without concurrence by the Division of Aeronautics.

I. Utilization of Personnel

Listed below are the duties to be performed by the various technical personnel assigned to the project.

QC Officer- Overall supervision of the QC/QA Program

(List of duties in brief)

Quality Control Technician (Plant)

(List of duties: see Policy Memo 96-2 for some of the duties required)

Quality Control Technician (Paver)

(List of duties: see Policy Memo 96-2 for some of the duties required)

J. Reporting of Test Results

All test data be reported on the following forms:

(Form and Description)

(Note: See forms listed in Policy Memo 96-2, Appendix A)

K. Control Charts

Control charts will be kept updated for the following test parameters and shall be available upon request by the Resident Engineer or the Division of Aeronautics:

1. Combined Gradation of Hot-Bin or Combined Belt Aggregate Samples (Drier Drum).
   (% Passing 1/2 in., No. 4., No. 8, No. 30, and No. 200 Sieves)
2. Asphalt Content
3. Bulk Specific Gravity of Marshall Sample (G_{sb})
4. Maximum Specific Gravity of Mixture (G_{mm})

SIGNATURE PAGE

As attested below, this plan will be adhered to during Hot Mix Asphalt (HMA) production:

Prime Contractor Signature: _____Date:_____

HMA Producer Signature:_____ Date:_____

Reviewed and Approved by:

Resident Engineer Signature:_____ Date:_____

Approved by:

Engineer of Construction & Materials: _____Date:_____
I.D.O.T., Division of Aeronautics